PR9350-02

Linear Displacement Transducer

Emerson PR9350-02 is a differential transformer for linear displacement measurement over a centered 50 mm span. It provides an inductive output for the documented carrier-frequency measurement chain.

BRAND	Emerson	ORIGIN	USA
MODEL	PR9350-02	PRODUCT	Linear Displacement Transducer
FAMILY	PR9350 Displacement Sensors	SOURCE	Emerson MHM-97864, Rev. 1.6, March 2026

MANUFACTURER SOURCE RECORD

PR9350 / K20-315 Linear Displacement Transducer Installation Guide
Emerson MHM-97864, Rev. 1.6, March 2026

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PR9350-02

Product Overview

SYSTEM FUNCTION

Emerson PR9350-02 is a differential transformer for linear displacement measurement over a centered 50 mm span. It provides an inductive output for the documented carrier-frequency measurement chain.

FUNCTION 1

Measures centered linear travel across a 50 mm span

FUNCTION 2

Uses a 5 Vrms carrier-frequency excitation

FUNCTION 3

Provides 270 mV/V documented sensitivity

FUNCTION 4

Supports displacement verification by coil-resistance checks

TECHNICAL NOTE

Excite the PR9350-02 only with the documented 5 Vrms, 3–5 kHz carrier and verify the A-B, B-C and shield connections before calibration. Establish the mechanical center and prove both travel directions without exceeding the installed stroke.

Technical Data and Acceptance

PARAMETER	VERIFIED VALUE
Complete order code	PR9350-02
Measuring range	-25 to 0 to +25 mm
Sensitivity	270 mV/V
Sensor supply	5 Vrms, 27–50 mA
Carrier frequency	3–5 kHz
Linearity error	±3.5% over 100%; ±0.5% over 60%
Coil resistance	A-B and B-C: 33.0–36.8 Ω
Operating temperature	-20 to +100 °C
Humidity	0–95% non-condensing

ENGINEERING BOUNDARY

Excite the PR9350-02 only with the documented 5 Vrms, 3–5 kHz carrier and verify the A-B, B-C and shield connections before calibration. Establish the mechanical center and prove both travel directions without exceeding the installed stroke.

Acceptance Path

1 IDENTITY

PR9350-02 and its matching conditioner are recorded.

2 ELECTRICAL

Excitation and both winding checks are within the documented values.

3 MECHANICAL

Centered travel is free through the required span.

4 FUNCTIONAL PROOF

Indicated displacement follows controlled movement in both directions.

Applications and Engineering FAQ

APPLICATION	ENGINEERING CONTEXT
Valve-stem displacement	Measures bidirectional linear movement around a documented center.
Actuator position feedback	Provides a repeatable inductive signal for compatible conditioning equipment.
Servo mechanism testing	Supports controlled travel and linearity verification through the usable span.
Turbomachinery auxiliary position	Records slow mechanical movement where the approved installation accepts an LVDT.

Model-Specific FAQ - Part 1

QUESTION	ANSWER
What displacement span is specified for Emerson PR9350-02?	The official guide specifies -25 to 0 to +25 mm, giving a centered 50 mm measuring span.
Which excitation must be used with Emerson PR9350-02?	Use 5 Vrms at a 3–5 kHz carrier frequency; Emerson also lists 27–50 mA sensor current.
What sensitivity should an Emerson PR9350-02 loop produce?	The documented sensitivity is 270 mV/V for the stated measurement arrangement.
How can the two Emerson PR9350-02 windings be checked before startup?	Measure A-B and B-C; each winding is documented at 33.0–36.8 Ω.

FAQ, Related Products and Source

QUESTION	ANSWER
What linearity limit applies to Emerson PR9350-02?	Emerson lists ±3.5% over the full range and ±0.5% over the central 60% range.
Can Emerson PR9350-02 be used in condensing humidity?	No. The guide permits 0–95% relative humidity only when non-condensing.
What temperature range applies to Emerson PR9350-02?	The documented operating temperature is -20 to +100 °C.
What proves correct commissioning of Emerson PR9350-02?	A controlled test should prove mechanical centering, both travel directions, stable excitation and displacement response across the required span.

MANUFACTURER SOURCE RECORD

PR9350 / K20-315 Linear Displacement Transducer Installation Guide
Emerson MHM-97864, Rev. 1.6, March 2026

Related Products on Apter Power

MODEL	APTER POWER PAGE
Bently Nevada 125728-01	View Bently Nevada 125728-01
Bently Nevada 125736-01	View Bently Nevada 125736-01
Bently Nevada 125760-01	View Bently Nevada 125760-01
Bently Nevada 126615-01	View Bently Nevada 126615-01
Bently Nevada 126632-01	View Bently Nevada 126632-01
Bently Nevada 126648-01	View Bently Nevada 126648-01
Bently Nevada 128031-01C	View Bently Nevada 128031-01C
Bently Nevada 128031-01D	View Bently Nevada 128031-01D

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